What Is Claimed Is:

1   1.   An emergency call processing system for mobile users,
2   comprising:
3   a receiver, receiving emergency data calls from the mobile
4   users; and
5   a queuing system, prioritizing incoming emergency data
6   calls, and subsequently responding to each of the
7   mobile users to address the emergency according to
8   the emergency data calls.

1   2.   The emergency call processing system according to
2   claim 1, the queuing system further comprising:
3   a first waiting buffer, storing incoming emergency data
4   calls in a first-in-first-out (FIFO) manner;
5   a   sorter,   categorizing   emergency   data   calls   and
6   prioritizing for each upon receipt from the first
7   waiting buffer;
8   prioritized   waiting   buffers,   receiving   and   storing
9   emergency data calls from the sorter, wherein each
10   prioritized waiting buffer is assigned to a different
11   level of priority, and stores the emergency data
12   calls with a corresponding level of priority; and
13   at least one processing unit, receiving and processing the
14   emergency data calls from the prioritized waiting
15   buffers according to their corresponding priority in
16   a FIFO manner.

1   3.   The emergency call processing system according to
2   claim 2, wherein the processing unit is operated by either
3   operator or automated system.

1   4.   The emergency call processing system according to
2   claim 1, wherein each of the emergency data calls carries caller
3   phone number and a message reporting the emergency.

1   5.   The emergency call processing system according to
2   claim 4, wherein the message is selectively one of voice, image,
3   text and combinations thereof.

1   6.   The emergency call processing system according to
2   claim 4, wherein each emergency data call further carries
3   location information or personal information for the caller.

1   7.   The emergency call processing system according to
2   claim 1, wherein a confirmation message is sent to each mobile
3   user upon receipt of a corresponding emergency data call.

1   8.   The emergency call processing system according to
2   claim 7, wherein the confirmation message comprises assigned
3   registration identification.

1   9.   The emergency call processing system according to
2   claim 1, wherein mobile users submit emergency data call and
3   replies to an emergency call center automatically using client
4   software installed in user equipment.

1   10.   The emergency call processing system according to
2   claim 9, wherein the user equipment changes to automatic
3   hand-shaking mode after receiving a confirmation message from
4   the emergency call center.

1   11.   The emergency call processing system according to
2   claim 10, wherein the emergency call center solicits relevant

3   information from mobile users in an alert message to the user

4   equipment.

1   12.   The emergency call processing system according to

2   claim 11, wherein the alert message is sent via short message

3   system (SMS).

1   13.   The emergency call processing system according to

2   claim 11, wherein the user equipment returns relevant

3   information to the emergency call center automatically upon

4   receipt of the alert message.

1   14.   The emergency call processing system according to

2   claim 13, wherein the user equipment also returns registration

3   identification, provided beforehand by the emergency call

4   center, with the relevant information.

1   15.   The emergency call processing system according to

2   claim 13, wherein the emergency call center utilizes an

3   interleaving approach to periodically communicate with user

4   equipment.

1   16.   The emergency call processing system according to

2   claim 11, wherein relevant information comprises location,

3   caller's physical condition, current surrounding images, or

4   combinations thereof.

1   17.   An emergency call processing method for mobile users,

2   comprising the steps of:

3   receiving an emergency data call from user equipment (UE);

4   and

5   replying to the UE to confirm and address the emergency.

1   18.   The emergency call processing method according to
2 claim 17, further comprising prioritizing arrival emergency
3 data calls.

1   19.   The emergency call processing method according to
2 claim 18, further comprising:
3   storing the incoming emergency data calls in a first
4   waiting buffer;
5   categorizing the emergency data calls;
6   determining and assigning a priority level for each
7   emergency data call output from the first waiting
8   buffer;
9   assigning different priority levels to prioritized waiting
10   buffers;
11   storing each emergency data call in one of the prioritized
12   waiting buffers according to the assigned priority
13   level, wherein each prioritized waiting buffer
14   operates in a first-in-first-out manner;
15   processing emergency data calls stored in the prioritized
16   waiting buffers according to the priority level
17   assigned to the prioritized waiting buffer.

1   20.   The emergency call processing method according to
2 claim 17, wherein the emergency data call carries caller phone
3 number and a message reporting the emergency.

1   21.   The emergency call processing method according to
2 claim 20, wherein the message is selectively one of voice, image,
3 text and combinations thereof.

1   22. The emergency call processing method according to
2 claim 20, wherein each emergency data call further carries
3 location information or personal information for the caller.

1   23. The emergency call processing method according to
2 claim 17, further comprising sending a confirmation message to
3 the UE upon receipt of the emergency data call.

1   24. The emergency call processing method according to
2 claim 23, wherein the confirmation message comprises
3 registration identification.

1   25. The emergency call processing method according to
2 claim 24, further comprising the UE switching to automatic
3 hand-shaking mode after receiving a confirmation message.

1   26. The emergency call processing method according to
2 claim 25, further comprising soliciting relevant information in
3 an alert message to the UE.

1   27. The emergency call processing method according to
2 claim 26, wherein the alert message is sent through a short
3 message system (SMS).

1   28. The emergency call processing method according to
2 claim 26, further comprising upon receipt of the alert message,
3 the UE returns requested information in an automatic way.

1   29. The emergency call processing method according to
2 claim 28, wherein the UE attaches registration identification
3 to the relevant information for return.

1   30.   The emergency call processing method according to
2   claim 28, further comprising periodically communicating with
3   the UE using an interleaving approach.

1   31.   The emergency call processing method according to
2   claim 26, wherein relevant information comprises location,
3   caller's physical condition, current surrounding images, or
4   combinations thereof.